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Copy 9 of 13

13 JAN 1971

MEMORANDUM FOR: Director, CIA Reconnaissance Programs  
SUBJECT: Program Progress Report

Forwarded herewith are three copies of the IDEALIST  
Program Progress Report for the period 1 October 1970 -  
31 December 1970.

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HAROLD F. KNOWLES  
Brigadier General, USAF  
Director of Special Activities

Attachments -  
As stated

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NRO review(s) completed.

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SAS/O/OSA: [REDACTED] (8 January 1971)

Distribution:

- 1 - D/CRP
- 2 - D/CRP
- 3 - D/CRP
- 4 - DDS&T Reg
- 5 - D/SA
- 6 - SAS/O/OSA
- 7 - D/O/OSA
- 8 - IDEA/O/OSA
- 9 - INTEL/O/OSA
- 10 - D/M/OSA
- 11 - R&D/OSA
- 12 - AMS/OSA
- 13 - RB/OSA

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Section 1

IDEALIST

DEVELOPMENT SUMMARY AND PROGRESS

(1 OCTOBER 1970 - 31 DECEMBER 1970)

**I. AIRFRAME**

**A. New Emergency AC Generator** - Test generator number one has completed over 700 hours of test operation in the LAC altitude chamber. Tests have shown that generator temperatures are held within specifications when delivering 8.5 KVA. Test generator number two has been installed in aircraft 054 and is presently undergoing flight service evaluation at Detachment G.

[REDACTED]

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**C. U-2R Flight Test and Operational Training Summary**

	<u>1 OCT-31 DEC</u> <u>FLTS.</u>	<u>1 OCT-31 DEC</u> <u>TIME</u>	<u>TOTAL</u> <u>FLTS.</u>	<u>TOTAL</u> <u>TIME</u>
1 - 051	13	65.2	246	814.6
2 - 053	11	54.4	209	832.3
3 - 054	32	118.0	264	867.2
4 - 055	22	77.6	291	935.0
5 - 057	32	109.3	355	1211.4
6 - 058	<u>28</u>	<u>78.5</u>	<u>349</u>	<u>1088.9</u>
<b>TOTAL</b>	<b>138</b>	<b>503.0</b>	<b>1714</b>	<b>5749.4</b>

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## **II. PROPULSION**

A. Sealed Crossover Tubes - The 200 hour flight service evaluation of improved engine combustion chamber sealed crossover tubes at Detachment G was completed. Teardown report indicated excellent condition and the engine was reinstalled for use until normal hot section inspection at 400 additional hours.

B. Fuel Control - A modified fuel control was installed in Article 054 during the week of 16 November 1970, for continued flight evaluation. This fuel control incorporates a new uprated manual (Emergency) schedule with the installation of a new PT2 bias cam designed to provide added fuel flow at lower altitudes to permit an adequate climb capability in emergency mode.

## **III. PAYLOAD**

A. "H" Configuration - Double imagery associated with camera hatch window junctions was encountered on [redacted] missions. 25X1 These missions combined low aiming angles with type 3414 film to produce noticeable double imagery. The new type 3414 film is more sensitive than previous film to the light transmitted through a second window. Viewing at low angles where the hatch window junction is in the field of view allows light from two pieces of glass to enter the lens system. By 25X1 masking off the secondary window, double imagery has been eliminated.

[redacted]

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V. SUPPLY

A. Project Depot - During the [redacted] over 50,000 pounds of outbound and over 48,000 pounds of inbound supplies were processed by the Project Depot with an average intransit time of four days.

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B. Project Headquarters - Headquarters Supply Division processed numerous line items for contingency requirements and disposition.

VI. RESEARCH AND DEVELOPMENT

A. General R&D

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D. Apochromatic 24" Focal Length Petzval Lens

1. During this time period the following major milestones were achieved:

a. Optical - The glass blanks were received and lens fabrication was subsequently initiated.

b. Mechanical - The optical system assembly design and procurement of scan head parts were completed. Ordering of ancillary parts for modifying the DELTA III camera was initiated.

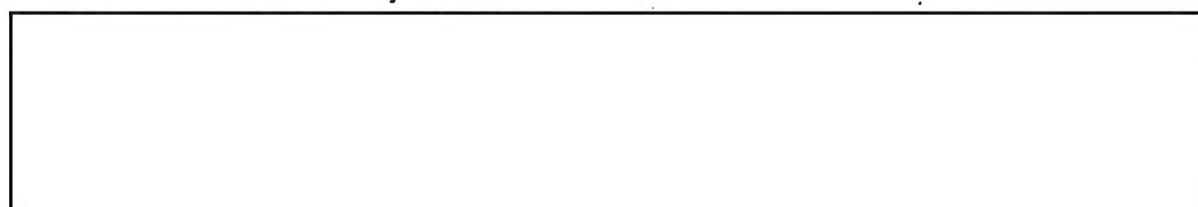
VII. AERO MEDICAL AND LIFE SUPPORT ACTIVITIES

A. Medical

1. Two final selections were made from the USAF pilot candidates. This is our first departure in recent years from obtaining candidates with aeronautical engineering degrees. The psychologists rate them extremely high on intellectual grounds, and they appear to be highly capable pilots.

2. The initial phase of Resistance to Interrogation training was completed in December and they will complete the Practical Phase in late January 1971.

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B. Life Support Equipment

1. Six-Line Release - The test program covering Engineering Change Proposal U-2R-61 concerning control of Personnel Parachutes began at LAC, Burbank, California, in early December 1970. Live-jump tests, using the S-1010 Pilot Protective Assembly (PPA) and the 901-J Full-Pressure Suit, are scheduled to begin at the El Centro, California, Test Facility on 9 February 1971.

2. Tree-Lowering Device - This device is now a standard part of the RQ-225 Parachute Assembly and all parachutes are being modified as they go through LAC for repack. The first two modified chutes arrived at Detachment H on 16 November 1970.

3. White Outer Coverall for S-1010 PPA - During the past summer project pilots were experiencing heat problems at maximum altitude especially on the back of the hands and on the thighs. As a possible solution, a new white, outer coverall of fire suppressant nomex was fabricated and test flown. Results were optimistic and new white coveralls are now in service for all project pilots.

4. Four S-1010 PPA's were delivered to Detachment H in November 1970 to provide a two-suit capability for [redacted] This provides a system similar to the two-suit system that [redacted] pilots now enjoy.

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C. Training

1. During the first week of December 1970 physiological training, including a full-pressure suit chamber flight and explosive decompression, was accomplished for [redacted]

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2. A new parasail launch platform is being fabricated in Florida in preparation for parasail training to be conducted in February or March 1971.

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Section 2

IDEALIST

OPERATIONAL SUMMARY AND STATUS

(1 OCTOBER 1970 - 31 DECEMBER 1970)

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I. OPERATIONAL MISSION SUMMARY

[redacted]

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II. GENERAL

A. RED DOT. Six sorties were flown in support of continuing film tests using various camera configurations in the U-2C/G and the U-2R. (6 sorties).

B. IRIS II. Seven test and qualification missions were flown with the modified optical bar camera.

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D. PILOT TRAINING.

successfully

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completed flight training in the U-2R on 17 November. Fourteen sorties  
were flown.

G. ATMOSPHERIC TESTS. Two NRO directed missions were  
flown in support of photographic tests in New Mexico.

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III. PILOT AND AIRCRAFT STATUS (AS OF 31 DECEMBER 1970)

A. Detachment "G" (Edwards AFB - North Base)

Aircraft

4 U-2R

1 U-2C

2 U-2G (Flyable Storage)

Pilots

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B. Detachment "H"

Aircraft

Pilots

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